



5/8" HIGH FLOW DRAW STRAW **INSTALLATION MANUAL**

Installation Instructions

P/N # 1050345

Dodge 1998.5-2004.5
(with in-tank pump conversion)
Dodge 2004.5-2014
GM/Chevy 2001-2008

PLEASE READ ALL INSTRUCTIONS CAREFULLY BEFORE INSTALLATION.

BD Engine Brake Inc.

Plant Address: 33541 MacLure Rd. Abbotsford, BC, Canada V2S 7W2

U.S. Shipping Address: 88-446 Harrison St, Sumas, WA 98295 U.S. Mailing Address: P.O. Box 231, Sumas, WA 98295
Phone: 604-853-6096 | Fax: 604-853-8749 | Internet: www.bd-power.com

Kit Contents:

1500381	1500382	1500383	1500384	1500313
				
Pickup Tube Clamp	Convoluted Hose	Bulkhead Fitting	Pickup Tube	-8 ORB x 1/2" Barb
Qty: 1	Qty: 1	Qty: 1	Qty: 1	Qty: 1
FT-37144	1500403	1452821	1500385	FT-73259
				
Low Profile Nylock Nut 7/8-14	Spring Clamp – 11/16”	1" Gear Clamp	O-Ring; Quad Ring -125	Stainless Set Screw; 1/4-20
Qty: 1	Qty: 3	Qty: 2	Qty: 1	Qty: 1
3/8" Fuel Hose				
Qty: 2"				
FT-33094	1500387	1462123	1462122	1604054
				
Flat Washer – 7/8"	Spring Clamp – 13/16"	1/2" Hose Plug	3/8" Hose Plug	1/2" Fuel Hose
Qty: 1	Qty: 1	Qty: 1	Qty: 1	Qty: 2"

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1500405**1" Hole Saw**

Qty: 1

Optional Accessories:

- 1050331 – FlowMAX 1/2" Big Line Kit

Required Tools:

- Flat Nose Pliers
- Side Cutter
- 3/8 Ratchet and common sockets
- Flat Blade Screwdrivers
- Imperial Allen Keys
- Crescent Wrench
- Hammer
- Flat Nose Chisel

Installation:

WARNING: It is highly recommended to have less than 1/4 tank before beginning this procedure

Before installing your big line kit, please ensure no pieces of the assembly are damaged or missing. If there are issues with your kit, please contact us toll free at 1-800-887-5030.

1. Raise the vehicle to a comfortable working height using a hoist or jack stands. Always ensure the vehicle is stable before commencing any work. Remove the negative battery terminal.

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2. Begin by removing the hose clamps for the filler neck and vent tube as pictured. Disconnect the hoses from the tubes.



3. Place an appropriate jack below the fuel tank and drop the tank several inches.

4. Once this is accomplished, remove any wiring connections, lines and hoses connecting the tank to the vehicle.

5. Lower the fuel tank slowly; you may need the help of an assistant for this. Take caution as remaining fuel makes the tank unstable when sloshing occurs.



6. It is recommended to blow or wipe any debris around the perimeter of the fuel pickup away before pickup removal to avoid placing debris in the tank.



Dodge Fuel Tank Procedure (1998.5 – 2014)

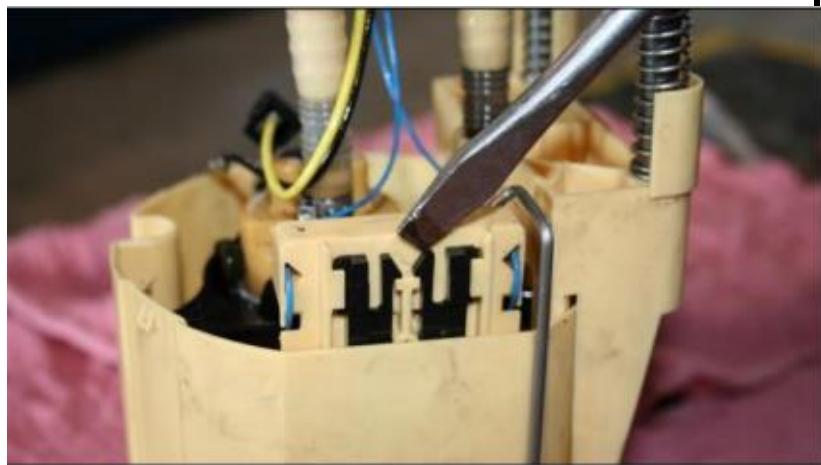
A. Using a flat nose chisel and a hammer, hit the locking ring counter-clockwise as viewed from the top. Eventually, the fuel pickup will “pop” upwards as it is under force from several springs.

NOTE: A ratcheting SST can also be used in place of a hammer and chisel for step A.

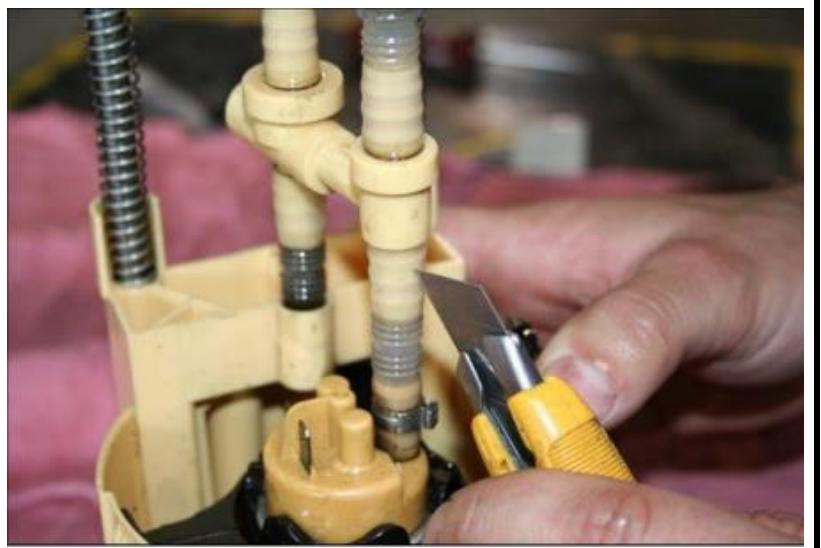
B. Remove the locking ring and lift the fuel pickup out of the tank.



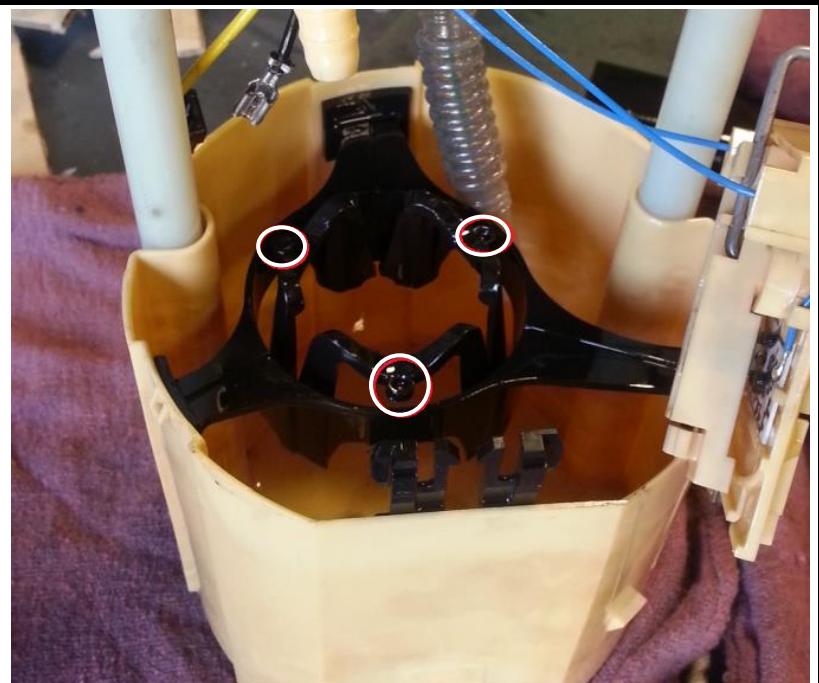
C. Using a pick or screwdriver, release the locking tabs that retain the fuel level sender. This will allow you to have more space to work.



D. Using a razor blade, cut the OE pickup tube vertically to release the hose off of the O.E. barb.



E. Now pry back the tabs that lock the fuel pump into place until the small hole is behind the pump frame and insert a small Allen key or pick into the hole (circled in white). Once all three tabs are locked in place, the pump can be lifted straight out.



F. Insert the tube clamp with lettering upwards until the first click.

G. Secure the pickup tube clamp with the supplied stainless set screw by threading it into the side of the pickup clamp.

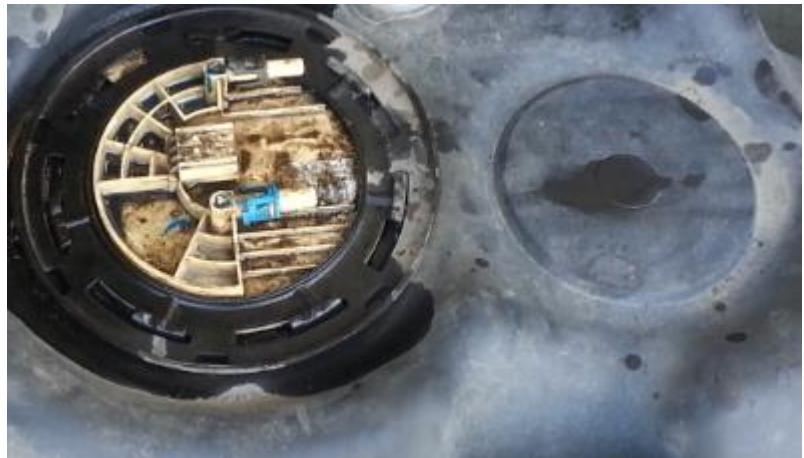


H. Now locate a flat area to place the bulkhead fitting. Ensure that there will be at least 1.5" of clearance above where the bulkhead is placed once the tank is re-installed.

I. Using the supplied 1" hole saw, drill a 1" hole into the tank.

Be sure to place a large cup or bowl below the hole location to catch all shavings.

The location of the hole may vary depending on model year.



J. Check the hole for any burrs or edges that may cause a leak, deburr as necessary.

K. Clean the top of the tank where the quad ring sits.

L. Tighten the ORB to 1/2" Barb fitting into the bulkhead until the fitting bottoms out. This will ensure a leak free seal. Now Insert the quad O-ring into the base of the bulkhead fitting and place bulkhead fitting in hole as seen.



Ensure the quad ring does not fall out of or twist in the bulkhead during installation.

Warning: On some Dodge models the float may be very close to hitting the bottom of the bulkhead in this location

M. Fasten the bulkhead to the tank by inserting the large washer then nylock into the tank and tightening on the base of the bulkhead. Use a crescent wrench on top of the bulkhead and a ratchet at the base of the bulkhead to tighten the assembly.



N. Once the bulkhead is tight, push one end of the convoluted hose over the nipple of the bulkhead and secure with the supplied hose clamp.



O. With the hose over the nipple, the fuel pickup assembly can be lowered back into place as shown. Slide another spring clamp over the hose then place the hose over the suction tube and secure with spring clamp.

P. Finally, the assembly can be lowered back into the tank.

CONFIRM THE HOSE WILL NOT INTERFERE WITH THE FUEL LEVEL FLOAT BEFORE REINSTALLATION



Q. Reinstall the fuel pickup using the hammer and chisel or SST. Ensure the locking ring turns far enough to seat in the grooves.

R. Push supplied rubber hose and 3/8" plug into the unused outlet line on fuel pickup, cutting fuel line to length if required. Install the spring clamp as shown.



S. Connect the 1/2" fuel line to the bulkhead fitting and secure with the supplied hose clamp.



T. Lift the tank back into location and routing the new fuel line as necessary. Reconnect all vents, electrical connectors before lifting the tank back to its original location.



U. Reconnect fuel pump, fuel fill hose and fuel tank vent and secure all hoses and lines as necessary.

BEFORE STARTING VEHICLE

Cycle the ignition to the “ON” position several times before to prime the pump before starting the vehicle.



GM / Chevy Fuel Tank Procedure (2001-2008)

A. Using a flat nose chisel and a hammer, hit the locking ring counter-clockwise as viewed from the top. Eventually, the fuel pickup should “pop” upwards as it is under force from several springs.

NOTE: A ratcheting SST can also be used in place of a hammer and chisel for step A.



B. Remove the locking ring and lift the fuel pickup from the tank.



C. Using a screwdriver, release the fuel return nipple.



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D. Now, pry back on the tabs holding the lower bowl in and pull the two pieces apart as shown.



E. Pull the lower pickup bowl out of the assembly and cut the corrugated fuel line off the nipple using a razor blade



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F. Locate the pickup tube clamp and insert it from the bottom into the assembly shown. Push the clamp upward until it reaches the first click.

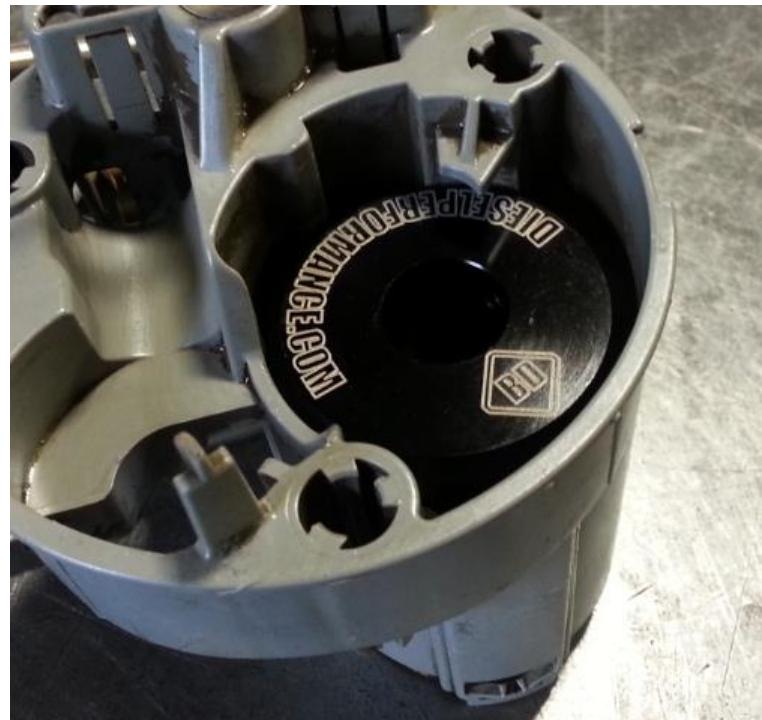


G. Drop the upper housing back into the lower bowl until the tabs click. Now, lower the machined pickup tube into the tube clamp until it rests on the bottom of the fuel bowl.

H. Mark the top of the tube with a black marker as shown.



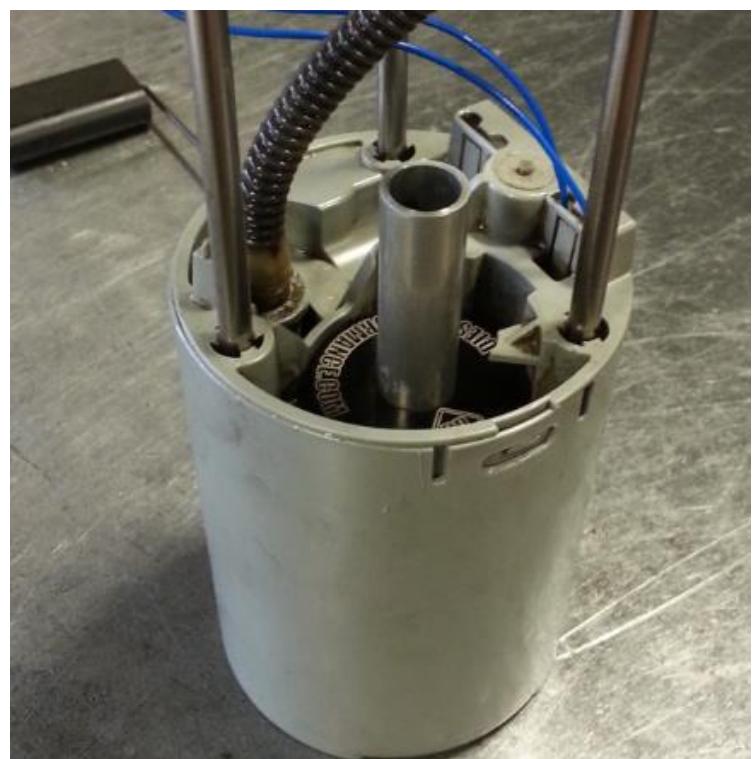
I. Using a long screwdriver, push the tabs in the housing and pull out the pickup clamp from the bottom. Use caution not to break the tabs.



J. Slide the tube into the clamp and place in position marked with sharpie. Tighten set screw to lock in place.



K. Again from the bottom, slide the pickup tube/clamp assembly up until the first click. Re-assemble the bowl and return line as shown.



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L. Now locate a flat area to place the bulkhead fitting. Ensure that there will be at least 1.5" of clearance above where the bulkhead is placed once the tank is re-installed.

M. Using the supplied 1" hole saw, drill a 1" hole into the tank.

Be sure to place a large cup or bowl below the hole location to catch all shavings.

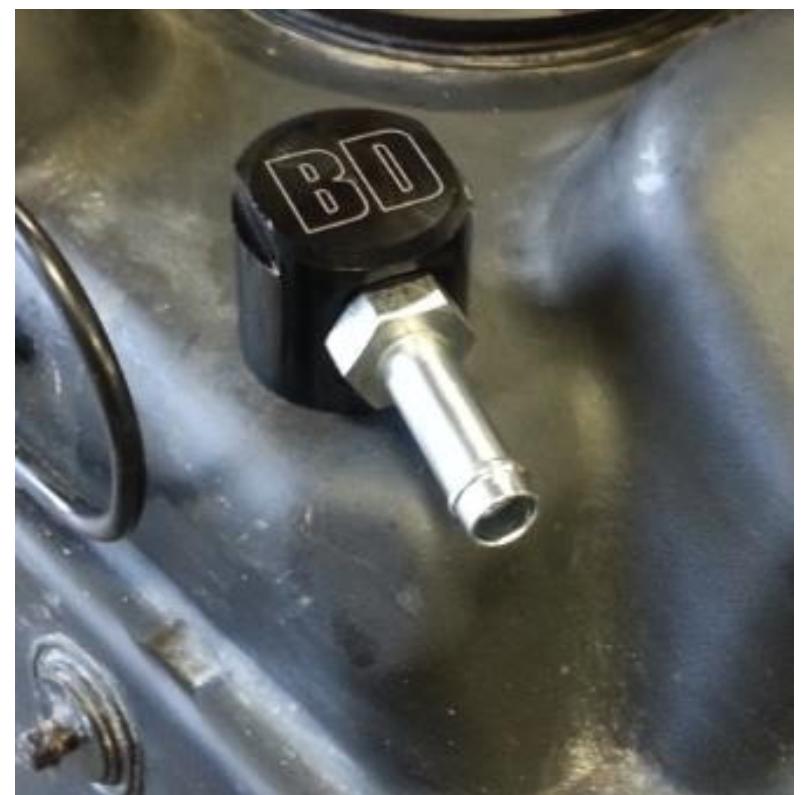
The location of the hole may vary depending on model year.



N. Check the hole for any burrs or edges that may cause a leak, deburr as necessary.

O. Clean the top of the tank where the quad ring sits.

P. Tighten the ORB to 1/2" Barb fitting into the bulkhead until the fitting bottoms out. This will ensure a leak free seal.



Q. Now Insert the quad O-ring into the base of the bulkhead fitting and place bulkhead fitting in hole as seen.

Ensure the quad ring does not fall out of or twist in the bulkhead during installation.

R. Fasten the bulkhead to the tank by inserting the large washer then nylock into the tank and tightening on the base of the bulkhead. Use a crescent wrench on top of the bulkhead and a ratchet at the base of the bulkhead to tighten the assembly.



S. Once the bulkhead is tight, push one end of the convoluted hose over the nipple of the bulkhead and secure with the supplied smaller 11/16" spring clamp.



T. With the hose over the nipple, the fuel pickup assembly can be lowered back into place as shown. Slide another spring clamp over the hose then place the hose over the suction tube and secure with spring clamp.

U. Finally, the assembly can be lowered back into the tank.

CONFIRM THE HOSE WILL NOT INTERFERE WITH THE FUEL LEVEL FLOAT BEFORE REINSTALLATION



V. Reinstall the fuel pickup using the hammer and chisel or SST. Ensure the locking ring turns far enough to seat in the grooves. Push supplied rubber hose and 1/2" plug into the unused outlet line on fuel pickup. Install the spring clamp as shown.



W. Connect the 1/2" fuel line to the bulkhead fitting and secure with the supplied hose clamp.



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X. Lift the tank back into location and routing the new fuel line as necessary. Reconnect all vents, electrical connectors before lifting the tank back to its original location.



Y. Reconnect fuel pump, fuel fill hose and fuel tank vent and secure all hoses and lines as necessary.



BEFORE STARTING VEHICLE

Cycle the ignition to the “ON” position several times before to prime the pump before starting the vehicle.